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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------|---------------------|------------------|
| 09/452,802 | 12/02/1999 | DINESH KASHINATH ANVEKAR | YO999-540 | 1773 |

30743 7590 10/23/2003

WHITHAM, CURTIS & CHRISTOFFERSON, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

EXAMINER

BAYARD, EMMANUEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 10/23/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,802

Applicant(s)

ANVEKAR ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/5/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 is/are allowed.
- 6) ☒ Claim(s) 1-3,5,12 and 14 is/are rejected.
- 7) ☒ Claim(s) 6-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This is in response to amendment filed on 8/5/03 in which claim 1-3, 5-12 and 14 are pending and claims 4 and 13 are canceled. The applicant's amendments have been fully considered but they are moot base on the new ground of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-3, 5 and 12, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Burgess et al U.S. Patent No 6,532,228 B1 .

As per claim 1, Burgess et al discloses a frequency hopping time division duplex indoor wireless communication system comprising: a master unit (see figs. 1, 4 elements 4, 40 and col.2, line 67 and col.3, line 6) having a controller (see fig. 4 element 60 and col.4, line 54) is functionally equivalent to the claimed (processor) and a first frequency selection unit (see fig.4 element 48 and col.3, lines 5-25 and col.5, lines 50-65) for finding a current frequency on which to transmit and receive during the current time slot and at least a second frequency selection unit (see col.9, lines 1-24) interfaced with said processor to select frequencies to be used in future time slots; and a plurality of slave units are functionally equivalent to the claimed (mobile stations) (see fig.1 elements 6, 8, 10 and col.2, line 67) communicating with said master unit (4).

As per claim 2, the time division duplex of Burgess et al includes logic units to perform frequency hop selection (see col.3, lines 20-24, 58-59) according to predetermined standards.

As per claim 3, the time division duplex of Burgess et al includes providing binary information about a Pico-cell related address bits and clock bits corresponding to the time slot (col.6, lines 37-50).

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As per claims 5 and 12, Burgess et al discloses a frequency hopping indoor wireless communication system comprising: a master unit (see fig. 1 element 4 and col.2, line 67) is and a plurality of slave units (see fig.1 elements 6, 8, 10 and col.2, line 67); said master unit (4) having a plurality of link state counters $C(i,j)$ (see fig.4 elements 62, 64, 66 and col.3, lines 35-45 and col.4, lines 53-57), wherein the states of wireless link between the master unit and a slave unit are recorded in link state counters provided one for each frequency of communication f_l between the master and the slave "I" (see col.6, lines 9-50).

As per claim 14, the time division duplex of Burgess et al inherently includes an expected state of wireless links with reference to interference.

Allowable Subject Matter

4. Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 8-11 are allowed over the prior art of record.

6. The following is a statement of reasons for the indication of allowable subject matter: the present invention teaches a frequency hopping time division duplex communication system. The prior arts of Burgess et al Patent No 6,085,076 teaches a similar frequency hopping communication system. However the above prior arts fail to anticipate or render obvious the

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recited features: the counter is reset to zero when a current transmission/reception with reference to slave unit on frequency is successful or when the count value exceed exceeds a reset threshold T as recited in claim 6. If the link state history counter values of all active slave units are above a threshold T, the master unit chooses a slave unit whose link state history counter has a lowest value, and decides on a packet size of one as recited in claim 8. If all frequencies corresponding different allowed packet sizes are such that the corresponding link state history counter values are above the threshold T, the master unit proceeds to choose another slave unit for transmission as recited in claim 9. The master unit constructs a link state history table of counters after receiving values of goodness counters from all the slave units and uses this information during a next scheduling period as recited in claim 10.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haartsen U.S. Patent No 6,028,853 teaches a method and arrangement for radio communication.

Asai U.S. Patent No 6,603,747 B2 teaches a communication control method.

Ludden et al U.S. Patent No 6,347,228 B1 teaches a location apparatus and method in a mobile telecommunications system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The

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examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour , can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Emmanuel Bayard

Primary Examiner

October 17, 2003